

[0067] **Figure 26** shows the Outlook™ call history screen 2500 and the pop-up call screen 2502. The quick direct buttons are not available, indicating that the user has chosen one of the options already. The call history screen 2500 in Figure 26 indicates on the top line that the call was transferred to a phone number ("Paul Chen Call Transfer to Phone Number ...").

[0068] **Figure 27** shows an Outlook™ contact card 2700 and that may be displayed when the user selects an "Open Contact" button on the pop-up call screen 2502. The contact card 2700 shows relevant information for the incoming caller and allows the user to access other, related information. For example, the user may select an Activities tab for the displayed contact to show a list of activities associated with the contact. Likewise, the user may select the "Details", "All Fields" or other tabs or options under Outlook to quickly access information regarding an incoming caller.

[0069] In one embodiment, the contact management software 114 provides a software event to the communications, registration, and user interface component 112, via interface component 113, whenever a new contact is created. The communications, registration, and user interface component 112, in turn, sends a software message back to the contact management software 114, instructing it to add a new data field associated with this contact, containing a unique contact identification key. The new contact is also transmitted to the contact info database 108. Upon receipt of a new incoming call, the registration server 106 searches the contact info database 108 for a match against the CLI of the incoming call. If a match is found, then the registration server 106 provides to the user computer 111 a TCP/IP message with the called number, callers information (name, title, etc., or just CLI), and the unique identification key to the user's Outlook contact database. In response, the communications, registration, and user interface component 112 causes window 2502 to pop-up, presenting the caller information. The "Open Contact" button on window 2502 is now related to the unique identification key. If the user presses this key, then component 112 sends a message via interface component 113 to contact management software

114 with this unique identification key, causing the corresponding contact window 2700 to appear.

[0070] The additional call handling functionality provided through Outlook™ may be provided as client software to be installed on the user computer 111. The user may download and install the client software from a web site associated with the TSPS. Once installed, the client software employs published APIs in Outlook™ to modify Outlook™'s standard user interface to include the buttons, menus and screens described above.

[0071] In another embodiment, the user may select an option on the notification window 2502 or 401 (option is not shown in the figure) causing the Telephony Service Provider System to record the subsequent conversation between the caller and the user. When the call is completed, the recorded conversation is automatically transmitted over the Internet 110 to the User's Computer 111 and stored in the Contact Management Software, associated with the contact related to the caller.

[0072] Many alternatives are possible under the invention described herein. For example, rather than employing separate fields within screens displayed by the user's contact and calendar management software (such as the fields 1302 and 1304 of Figure 13), the system may use existing fields in such software for determining how to handle calls. For example, appointments under Outlook™ may be assigned any of the following appointment status fields: free, tentative, busy, out of office, or private. Based on the user's predefined call routing code, the system may route calls based upon these existing fields. For example, if an appointment is designated by the user as "private", then all calls may be routed to the user's voicemail system (or secretary). However, if an appointment is designated by the user as "free", then calls may be routed directly to the user, such as at the user's office phone or cellular phone. In general, the system creates a rules base that, based on user input, defines call screening or handling options for incoming calls. To handle calls, the system employs existing fields

and data under the user's contact and calendar management software, or creates new fields for this software under APIs established for the software.

[0073] Calls may be routed under numerous user-defined methods. For example, the user may employ existing fields in the contact and calendar management software to define how calls are routed. For example, the user may employ the "Other" field under the contacts portion of Microsoft Outlook™ to define a user number, or client number, for one or more individuals listed in the user's contacts. The system may then store this field within the contact database, together with an associated call routing list. The call routing list is effectively a table listing in a first column client numbers, and in a second column associated assistant phone numbers for that client.

[0074] While calls may be routed based on one or more pop-up windows in which users enter data or click options (e.g. window 2502), the system may instead automatically route calls. Alternatively, the window 2502 may omit the "Open Contact" button and instead automatically open an appropriate contact card or other contact information. Thus, any relevant information stored in the contact database may be automatically displayed to a user when an associated incoming call is received. For example the system could be configured in such a way so that as an incoming call is received, the user would be automatically presented with the callers contact information, and a list of all messages to or from this caller, or all calendar events associated with this caller, or all documents associated with this caller, or any combination of these or similar items.

[0075] As describe in embodiments above, standard contact management or personal organizer software product, such as Microsoft Outlook or IBM Lotus Notes may be used, without modification to the standard product itself, in conjunction with a Telephony Service Provider System (TSPS), to provide a call handling system. A user may enter an additional piece of information for each of these contacts. This additional information indicates how calls should be handled if received from this contact. An interface software component, residing on the user's computer, reads the contact database from the user's contact management